Champion Ice Manufacturing and Cold Storage Company (City Ice and Fuel Company)
40 East Second Street
Covington
Kenton County
Kentucky

HAER No. KY-26

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
Southeast Region
National Park Service
U. S. Department of the Interior
Atlanta, Georgia 30303

HISTORIC AMERICAN ENGINEERING RECORD

Champion Ice Manufacturing and Cold Storage Company
(City Ice and Fuel Company)

HAER No. KY-26

Location:	40 East Second Street Covington, Kenton County, Kentucky
Present Owner:	City of Covington 18 West Pike Street Covington, Kentucky 41011
Present Occupants:	Buildings are currently being used by a commercial livery operation, an architect's office, and an art gallery/framing business.
Present Use:	Buildings are mostly vacant, however, the above named businesses do use portions for their use.
Significance:	This complex is important to the industrial development of the city of Covington, as it relates to the manufacturing of ice and the storage of perishable foods. Surviving machinery adds to our understanding of the commercial process of the manufacturing of ice.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Dates of erection: c. 1884 and later.

2. Architects and contractors: unknown.

3. Original and subsequent owners: References to the chain of title to the land upon which the structure stands are in the Recorder's Office for Kenton County in Covington, Kentucky:

1889	Deed, December 31, 1889, recorded in Deed Book 65, page 281. Charles Wallace to Amos Shinkle
1890	Deed, September 1890, recorded in Deed Book 68, page 630. Amos Shinkle to Champion Ice Manufacturing and Cold Storage Company.
1924	Deed, April 8, 1924, recorded in Deed Book 204, page 500. City Ice and Fuel Company to City Ice and Fuel Company.
1977	Deed, April 4, 1977, recorded in Deed Book 688, page 79. City Products Corporation to JFM Partners.
1986	The property has recently been acquired from JFM Partners by the city of Covington and has not yet been assigned a deed reference.

4. Original plans not available.

B. Historical Context:

The Champion Ice Manufacturing and Cold Storage Company was the largest and more important of two companies located within Covington involved in the making of ice and cold storage of perishable foods. The buildings were constructed in c. 1884 to house the manufacturing, storage and shipping of ice as the principal activity. Cold storage of food items was also accommodated. During the life of the business, storage and delivery of coal was also an important business activity.

The complex was constructed in a part of the city that housed important, diverse industries during the late 19th century. Located in close proximity were a stone and tile works, glass manufacturing and the distillation of whiskey.

Initial officers of the company were Bradford Shinkle, president, and R. G. Hemingray, secretary. Mr. Shinkle is believed to be a son of Amos Shinkle, an entrepreneur with diverse business interests and famous as the driving force responsible for the completion of the nearby Suspension Bridge, a National Historic Landmark. Mr. Hemingray was owner of the nearby Hemingray Glass Factory.

In 1913, the Cincinnati Ice Company leased the business. This company was a much larger operation and incorporated the Champion facilities within its overall Cincinnati operation. It continued to serve its northern Kentucky customers until 1975, when it ceased operation. During this period, it provided block, bagged and crushed ice to extensive clientele for residential and business uses. It played an important role in the sale and distribution of perishable foods.

Prior to the invention and use of the ice making equipment, the standard method of obtaining ice was by cutting it from frozen rivers, streams and ponds, and storing it underground for uss in the summer.

PART II. ARCHITECTURAL INFORMATION

The following description was taken from the National Register of Historic Places nomination for the various rooms of the complex:

Area "A" - Plant Office

Early records indicate this room to have always been the office location (dated to the late 1800s). Located at the southeast corner of the property, it is accessible to two public streets, Scott Street being a main access from the riverfront to the central business district. The room's interior consists of plaster on lath, walls and ceiling, with a paneled wainscoat to a four-foot height around the room. The three-sided bay window on the east wall allowed for the office staff to observe the shipping and loading operations along the Scott Street side of the plant. Shipping orders were issued through a panel in one of the windows. Heat was provided by an old "pot belly" wood burning stovs (still exists in the plant and will be returned to the office, as the flue and chimney are still in place) An expanded wire "cage", five feet in height, confines a 8x6-foot areas as one enters through the Second Street door. Ths space is presently used as the office for a livery.

Area "B" - Shipping

Originally, this area was the "engine" house and contained the heavy compressors used in the manufacturing of the ice. About 1920, the compressors were moved to their present location, and the area was

converted to a bagging and shipping room. The room had to be cooled to 32 degrees Fahrenheit, so the exterior brick walls were insulated by furring a wood wall 12 inches from the face of the brick and filling the void with sawdust. Coolant lines (2-inch pipe, 16-inch o.c.) traversed the ceiling areas and contained compressed ammonia gas (these have since been removed). Above, the coolant lines was a suspended wood ceiling with a ventilated attic space, where processed ice (crushed, cubed, or blocked) was either shipped out through a loading dock along the east wall or loaded onto the vending racks which were located on the south (Second Street) wall. The floor material has been removed, but is being stored for replacement. This room is 42x62 feet.

Area "C" - Bagging-Crusher

This area was the original shipping area that was expanded to Area "B" during remodeling in 1920. The wall, ceiling and floor construction is similar to Area "B" but of much older vintage. Ice entered this room in 300-pound blocks from the freezing tanks. It was scored into 50-pound blocks, which were either crushed and bagged, shipped out or stored in the adjacent storAge tower. As in Area "B", the room had to be maintained at 32 degrees. This room is 40x49 feet.

Area "D" - Ice Storage Tower

This is a "5-story" tower with no floors. The exterior walls are 2-1/2 feet thick brick bearing walls, insulated similar to Areas "B" and "C" with steel room trusses, 8 feet in sectional height, spanning the short span, 20 feet on center. A sub-ceiling attached to the bottom of the trusses created an 8-foot-high attic space, which was ventilated by large louvers on the east and north walls. This construction allowed for the entire interior space to be protected from the warm summer temperatures. The space was used to stockpile huge quantities of ice during the winter months, to be sold during the peak sale months of the summer. Along the south wall, adjacent to Area "C" are two hand-cranked elevators, each designed to lift one 300-pound block of ice up to the highest level of the stockpile. The ice was stacked over the entire area, with a blanket of straw separating each layer, until the "5-story" height or 60 feet was reached (approximately 363,000 cubic feet of ice). A stairs, located in the southwest corner, allowed the men to climb down from the stack at the end of the day. This room is 40x49 feet.

Area "E" - Manufacturing Area

Originally, the space was approximately two-thirds as long as it exists today. The 1920 remodeling added space on the north end for the compressor area, which was located from Area "B". Following the 1920 remodeling,

freezing tanks (brine tanks) were placed on both sides of the can fillers (area noted as equipment storage on plan). The exterior walls are of brick and are roof bearing. A center row of steel columns, which supported the roof loads, also contained the tracks of overhead cranes that move the ice and water cans to and from the tank fillers. Four large roof clerestories provide natural lighting to the space. The roof construction is wood frame between steel spandrels. The area was not insulated, as were Areas "B", "C", and "D" and, during the hot summers, the efficiency of ice making was greatly decreased. This room is 46x242 feet. The front part is used as a stable for horses and storage of carriages.

Area "F" - Equipment Room

This section of the plant is three stories in height (with floors). The ground floor was dirt and was used for storage of horse-drawn delivery wagons. Portions of an old lift platform, which lifted the wagons to the second floor for major repairs, still exist. The upper floors were also for storage of miscellaneous equipment and dry goods. The floor framing was an engineering "marvel" for its time. It was a combination of heavy timbers, post tensions with 1-inch diameter steel rods in an inverted "bow" arrangement, and 10-inch diameter cast iron columns. The exterior walls are brick-bearing with a wood frame roof structure, and is probably the most interesting structural area of the plant. This room is 45x125 feet. The first floor is used for an art gallery and picture framing business. Part of the second floor is used for an architect's office, and part of the third floor is an artist's studio and storage.

Area "G" - Boiler Room

This area contained a coal-fired boiler that provided heat to the equipment repair and storage building. The exterior walls are brick and are roof loading bearing. The space is approximately two stories in height, with no floors and a large clerestory on the roof used for both light and ventilation. The brick smoke stack on the north wall still exists, but the boiler has been removed. This room is 28x30 feet.

Area "H" - Cold Storage Building

As the company name implies, this was the area used for the storage of fresh produce. Being located on the river, produce shipped by boat would be stored here and distributed to local retailers. The area is three stories in height, each floor being identical in plan. Six "cubicle" type rooms, each containing an overhead coolant line with ammonia gas compressed by the same equipment used in the ice making area, are on each floor. The structure is a very early example of poured concrete construction (flat

slab, post and beam). The exterior walls are brick, with the wood furred insulation space similar to Areas "B", "C", and "D". The old wood refrigerator-type doors, with the original hardware still exist and the elevator, located at the southwest corner of the building, is a fine example of early elevator technology. This room is 45x125 feet. This area is not in use and is in poor condition with some deterioration.

Mechanical Equipment

The following description is taken from the National Register nomination. The plant manufactured ice by using the ammonia compression method, a method that was most efficient and widely used in the industry. Champion used five vertical compressors, manufactured by the York Manufacturing Company of York, Pennsylvania. The ammonia was pressurized and led into compressors to be compressed to the right pressure. The pressurized gas was forced into double-pipe condensers, which were composed of 17 stands of pipes, with each stand having eight lines where circulating water was used to cool the ammonia gas to a liquid. Then, the ammonia liquid would flow into a series of coil lines which were strands of pipe 1-1/2 inches in diameter. Each strand contained 10 piles 80 inches long. These lines ran under two large galvanized tanks, 80 inches long, 16 inches wide, and 4 inches deep. The tank contained brine that acted as the cooling agent. Galvanized sheet cans, with a 300 pound capacity, were filled with fresh water from artisan wells located near a cast iron and sheet metal filler that filled nine cans at a time. The cans were then lowered into the brine tank by an electric crane located approximately 10 feet above the tank. The crane transported the cans a distance of 80 feet from the water source to the tank, where they were placed in the brine solution and the water froze. After freezing, the cans were removed from the brine tank and transported to another tank containing fresh water. The cans were placed in the fresh water to loosen the frozen blocks of ice and then raised and placed in a machine that tilted the cans to allow the ice to slide into the ice storage area. Here, it was stacked and a blanket of straw spread atop the new layer. The storage tower had a capacity of 365,000 cubic feet of ice. As needed, ice was brought to a scoring machine that cut the larger 300 pound block into 50 pound blocks. Then, it was sold as block, bagged or crushed ice. Remaining equipment includes:

Galvanized sheet steel ice cans, 300 pound block, only 9 cans remain.

Two 3-ton overhead cranes with track and electric drives, hand-controlled and used to transport nine 300 pound cans from filler to brine tanks to dump.

Ammonia compressors, 10x10 (piston diameter and stroke), and manufactured by York; drive belt from flywheel to electric motor, pre-1900s vintage.

Ammonia compressors, 7x7 York with 5-inch diameter flywheel, pre-1900s vintage.

Ammonia compressors, 6x6 York with belt drive, pre-1900s.

Ammonia compressor, 14x14 York, largest unit in plant, is approximately 10 tons and only direct drive unit with a 7-inch diameter synchronus electric motor, 125 hp. and drive.

One brine tank used for freezing cans, pipes removed.

One ice scoring machine with 1.5 hp motor.

C. Site:

General setting and orientation: The main facade of the complex sits on the north side of Second Street. At the rear of the property line is a high concrete flood wall that visually separates the complex from the riverfront and the Cincinnati skyline. The complex is found in an area composed of mixed land use, housed in a variety of styled buildings. There is no historic district potential, although the complex is located one block of the Covington/Cincinnati Suspension Bridge, a National Historic Landmark.

PART III. SOURCE OF INFORMATION

A. Bibliography:

Kentucky Historic Resources Inventory: 1984
National Register of Historic Places Nomination Form: 1978
Recorder's Office: Kenton County, Kentucky
Sanborn Insurance Maps

B. Supplemental Material:

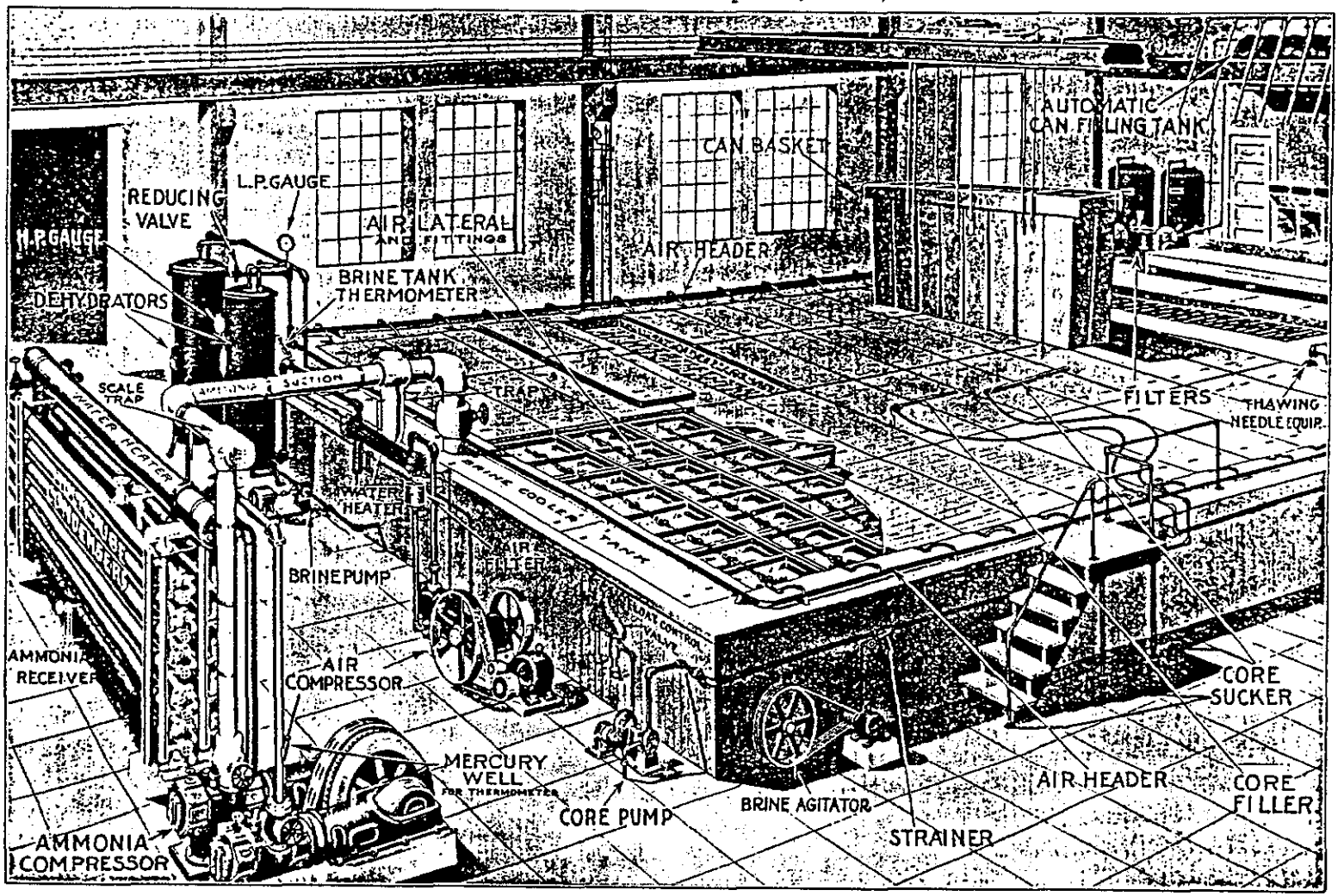
Prepared by: Fred Mitchell
Preservation Consultant
Historic Preservation Associates
P. O. Box 8933
Cincinnati, Ohio 45208
May 14, 1986

PART IV. PROJECT INFORMATION

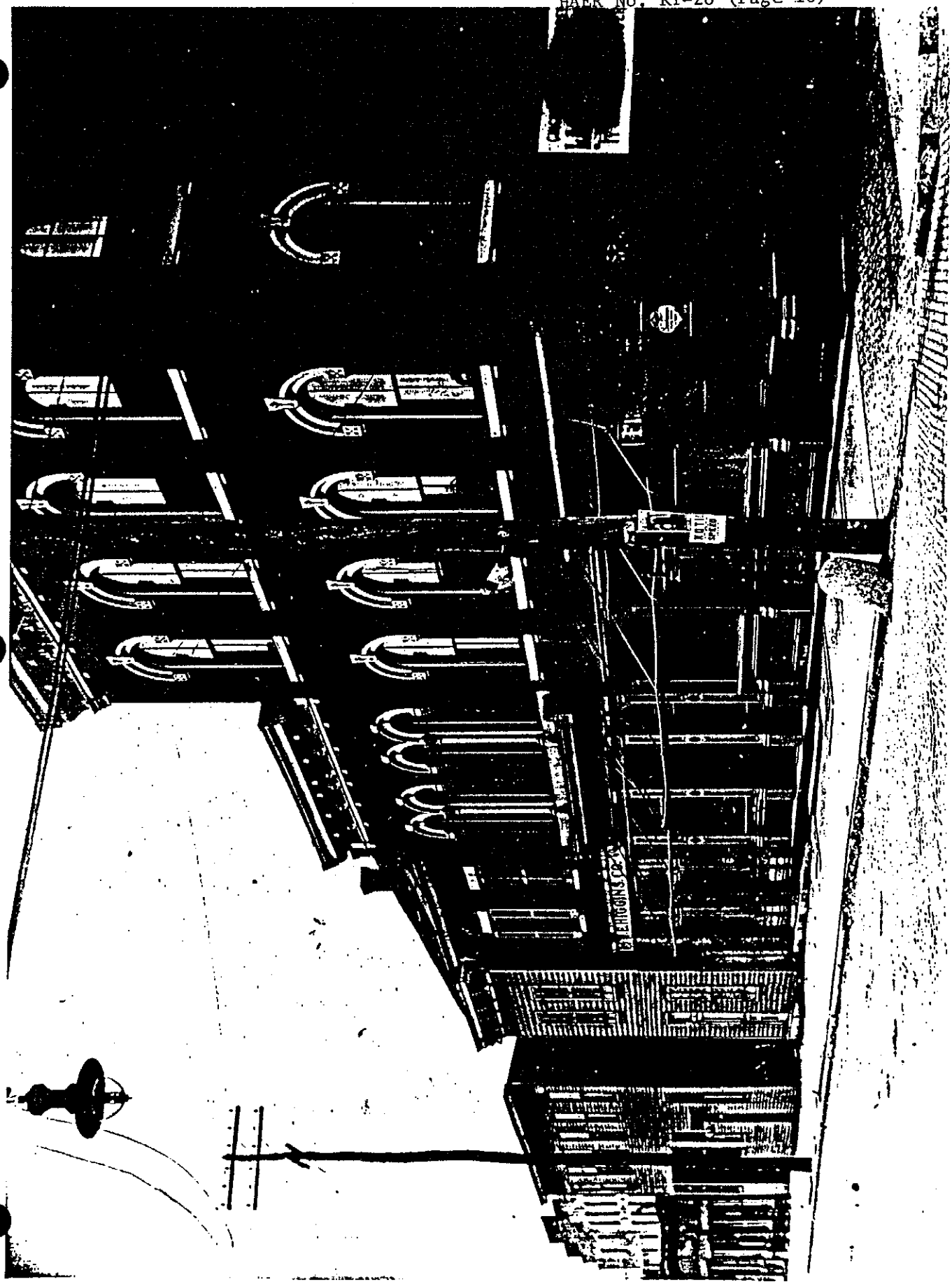
This documentation is presented as part of the stipulations of a Memorandum of Agreement, executed in connection with an Urban Development Action Grant received by the city of Covington, Kentucky, from the Department of Housing and Urban Development, for acquisition of land and development of the riverfront.

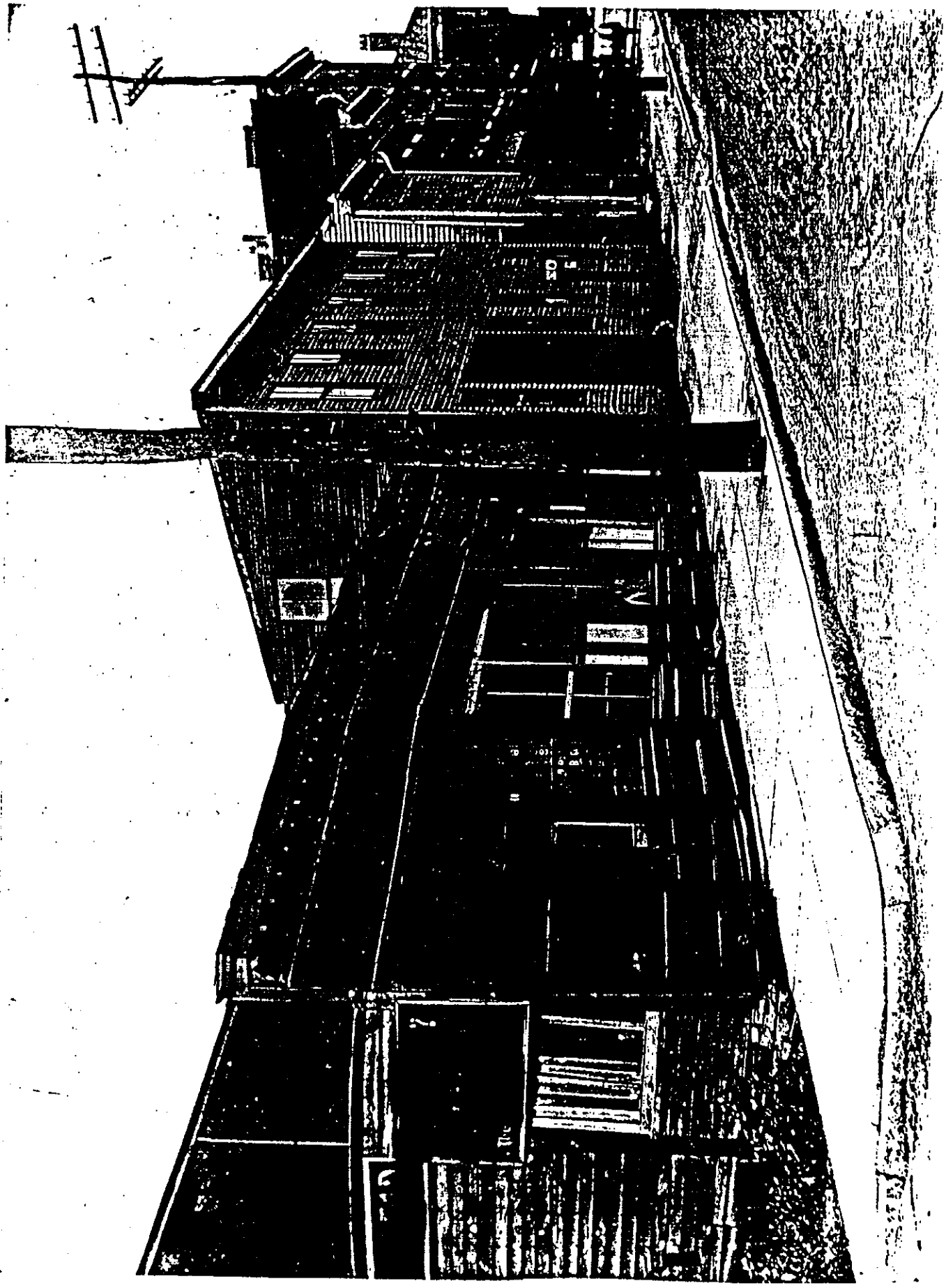
General visual description of ice making process.

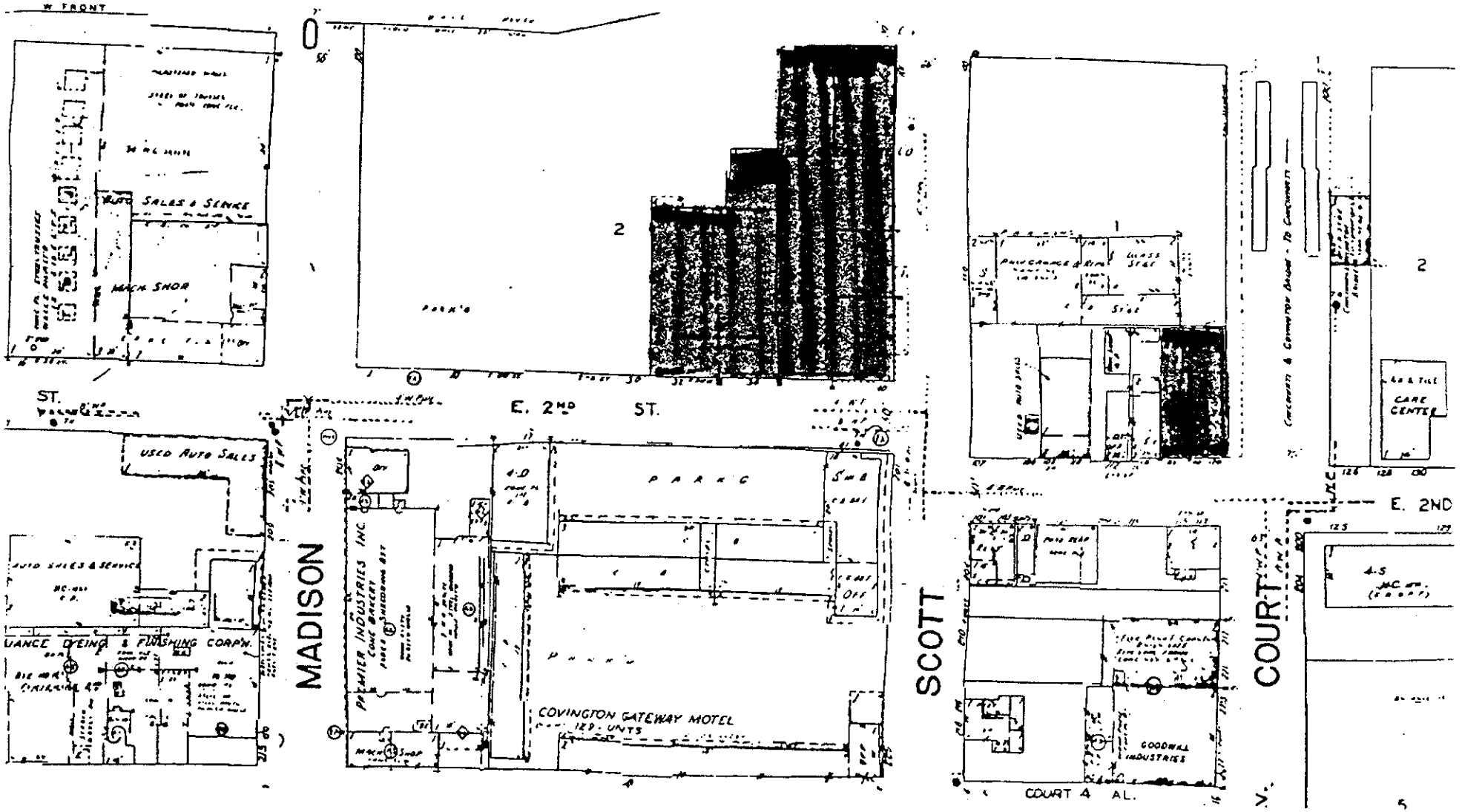
Taken from: Martocello Clear Raw Water Ice Systems and Supplies
Jos. A Martocello & Co., Philadelphia, Pa., 1931



MARTOCELLO SERIES BRACKET DROP TUBE SYSTEM, HIGH PRESSURE
(Patented)
For Making Clear Raw Water Ice


LEHIGH IRON CO.

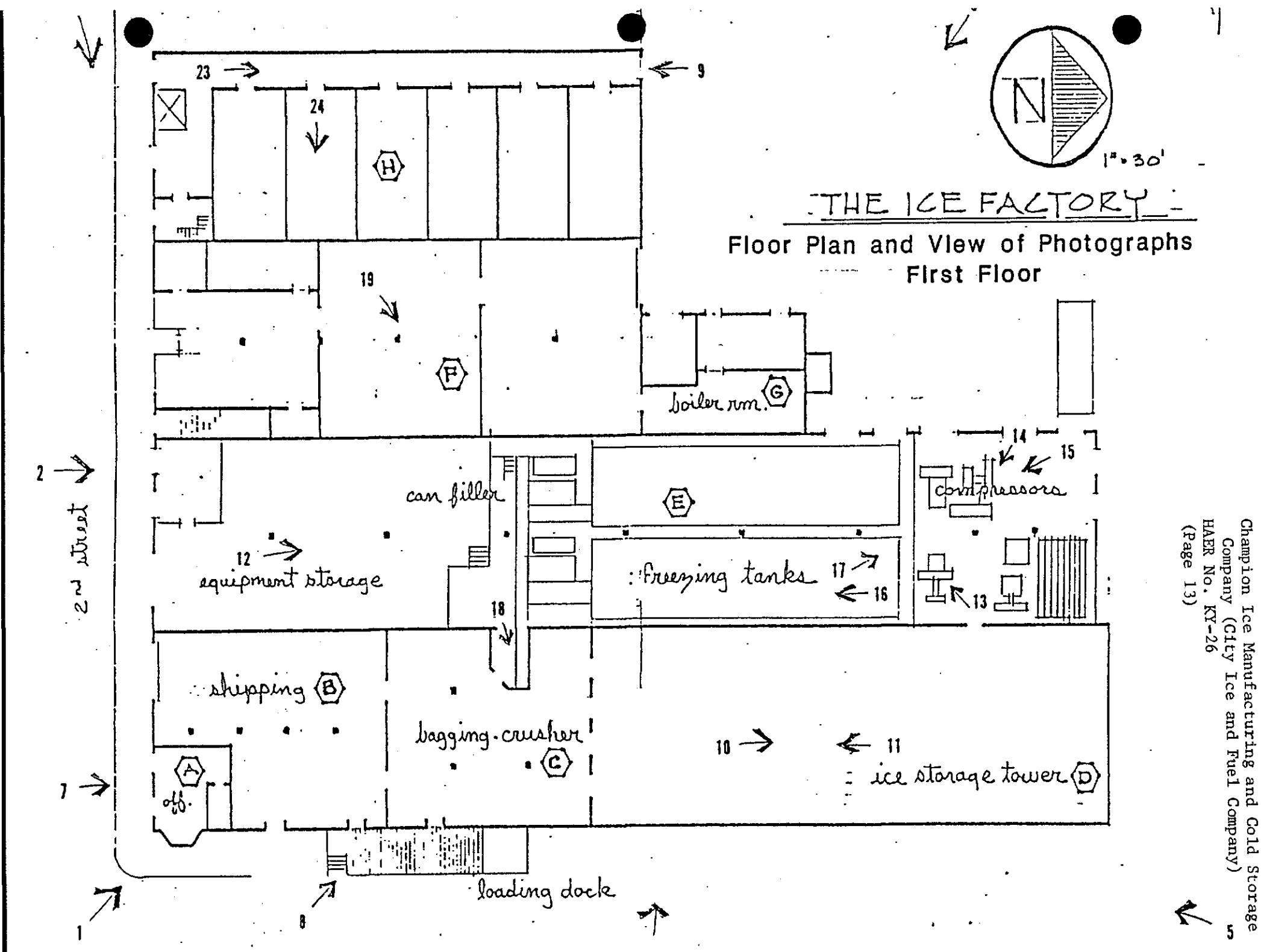




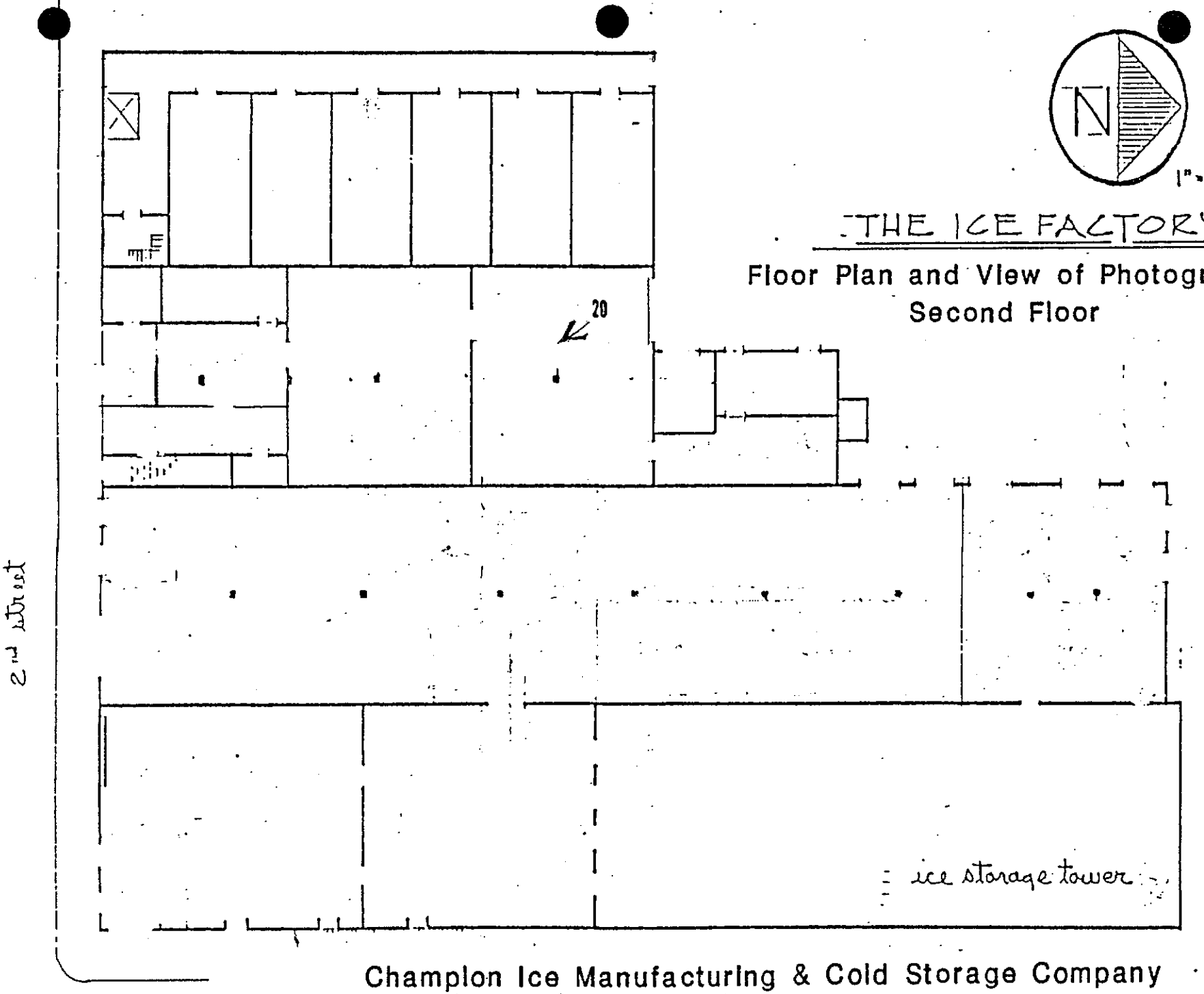
DETAIL OF 1980-SANDBORN MAP SHOWING EXISTING BUILDINGS ON PROPOSED RIVERFRONT PROJECT SITE AND IN IMPACT AREA

AUGUST 1984

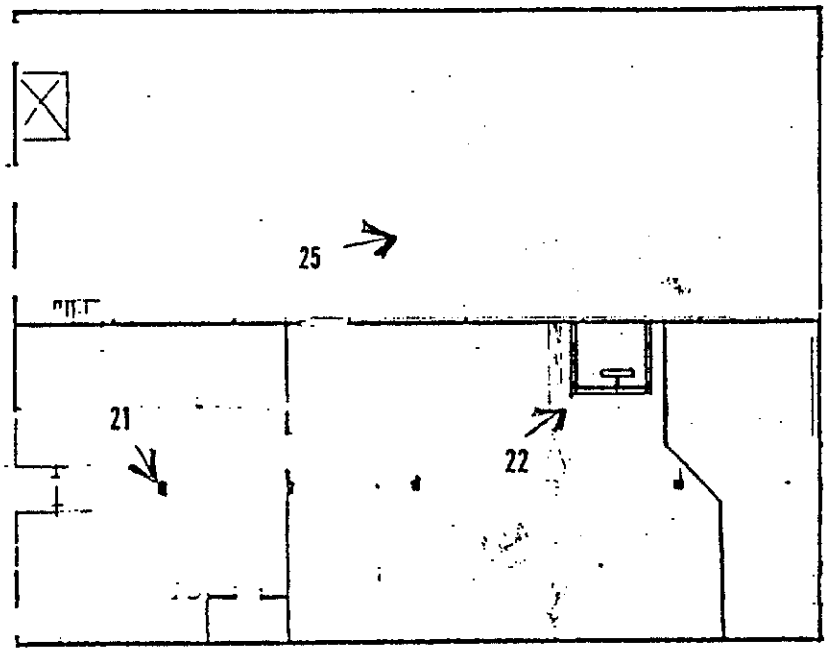
Champion Ice Manufacturing Company (City Ice and Fuel Company)
HAER No. KY-26, (Page 12)

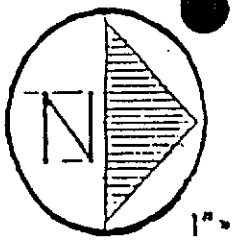


Champion Ice Manufacturing and Cold Storage Company (City Ice and Fuel Company)
HAER No. KY-26
(Page 13)



Champion Ice Manufacturing and Cold Storage Company (City Ice and Fuel Company)
HAER No. KY-26
(Page 14)





THE ICE FACTORY

Floor Plan and View of Photographs
Third Floor

2nd Street

ice storage tower

Champion Ice Manufacturing & Cold Storage Company
Covington, Kentucky

Champion Ice Manufacturing and Cold Storage Company (City Ice and Fuel Company)
HAER No. KY-26
(Page 15)